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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/955,796	09/18/2001	Ed O. Schlotzhauer	10010804-1	1044

7590 03/12/2004

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EXAMINER	
WEST, JEFFREY R	

ART UNIT	PAPER NUMBER
2857	

DATE MAILED: 03/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/955,796	SCHLOTZHAUER ET AL.	
	Examiner	Art Unit	
	Jeffrey R. West	2857	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05 December 2003*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-40* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-40* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *05 December 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-4, 7-9, 14-33, and 36-40 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,385,552 to Snyder.

Snyder discloses a method for collecting and controlling test measurements using programmed instructions comprising determining the variation to a measurement process (i.e. determining a test of interest to perform and relating the test of interest to test variables and independent variables and varying the test variables during the process) (column 3, lines 50-58 and column 16, lines 5-14), providing a process modification software module including a user defined function for causing the variation and associating the user-defined function with the variation function wherein control is passed to the user-defined function when a variation point in the computer program is reached (i.e. a menu subroutine is executed when a variation point of the program is reached and, upon the selection of a user-defined function/procedure from the menu, control is passed from the menu subroutine to

the selected procedure/passed into the measurement process) (column 26, lines 33-67).

Snyder discloses that the function calls used in the process are operable to invoke interfaces and to pass parameters to the variation functions including keywords (column 26, lines 62-67) or measurement data (column 29, lines 49-53) as well as operable to receive/retrieve parameters back from the variation function including control parameters indicative of the selected instructions provided (column 26, lines 49-52). Snyder also discloses an interface servicing element (i.e. menu interpreter) that services an interface recognized by the measurement process (i.e. the menu interpreter is called upon when the variation point is reached in order to execute the menu subroutine for obtaining the user defined function) (column 23, line 57 to column 24, line 3), wherein the interface is selected by the user (column 26, lines 16-44) and operates in accordance with a predetermined binary protocol (column 27, lines 20-24).

Snyder also discloses that the measurement process is first initiated through system initiation using a first plurality of instructions followed by variation using the user-defined menu functions with a second plurality of instructions (column 22, lines 28-33), including a plurality of function calls (column 25, line 62+), and, upon a user-defined selection, return the control to an internal measurement process procedure (column 18, lines 56-62).

With respect to claim 8, Snyder also discloses providing the process modification software modules as Active X (i.e. Component Object Module) Dynamically Linked Libraries (column 20, lines 12-23).

With respect to claims 14-18, Snyder discloses that the variation in the measurement process modifies either string or numeric data (column 14, lines 10-11) as well as provides a menu of selectable alternatives for user-modification of control parameters, test device configuration, and device input signals (column 3, lines 53-55, column 5, lines 3-6 and 50-59, and column 17, lines 31-38) and since the parameters are used for control of the device inputs and configuration, these parameters are considered to be digital control codes.

With respect to claims 19 and 20, Snyder also discloses that in addition to the aforementioned user-defined function called by the variation point that calls to the menu subroutine, further user-defined security and test set functions are also called to when associated variation points for the security and test set subroutines are reached (column 23, lines 57-67).

With respect to claim 9, Snyder also discloses executing both the measurement process and the process modification in the same computer space (i.e. computer "200") (column 3, lines 49-58 and Figure 1).

With respect to claim 39, since the function calls disclosed by Snyder are in the instruction code, operable to control the measurement process at a variation point in the code, and allows corresponding user input to modify the measurement process, it is considered inherent that the designer of the instruction program has anticipated

that the user may want to interact with or modify the measurement process because the designer of the code would have eliminated the possibility of user intervention and would not have provided user prompts if such interaction was not desired.

With respect to claim 40, Snyder discloses a computer readable medium in accordance with the process (column 3, lines 51-53) and a physical interface operable to supply signals to a device under test and receive signals from a device under test (column 3, lines 53-58).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claim 5, 6, 10-13, 34, and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Snyder in view of U.S. Patent Application Publication No. 2002/0026514 to Ellis et al.

As noted above, the invention of Snyder teaches many of the features of the claimed invention including an automatic testing system comprising a user interface to allow the user to control the testing a device wherein the interface operates in accordance with a predetermined binary protocol. Snyder does not teach, however, specifying that the predetermined protocol be a Simple Object Access Protocol or Common Object Request Broker Architecture or that the measurement process and

the modification software are located in separate remote computers that communicate over a network.

Ellis teaches automated tool management in a multi-protocol environment comprising measuring/polling software located on a server computer system with corresponding processor and memory (0025, lines 1-13) and user process control software (0007, lines 11-16) located on a separate remote computer (0023, lines 13-18), wherein the process control software and the monitoring/polling software communicate over a network using predetermined protocol including Common Object Request Broker Architecture, and Simple Object Access Protocol (0007, lines 1-11).

It would have been obvious to one having ordinary skill in the art to modify the invention of Snyder to include specifying that the predetermined protocol be a Simple Object Access Protocol or a Common Object Request Broker Architecture, and that the measurement process and the modification software are located in separate remote computers that communicate over a network, as taught by Ellis, because, the combination would have eliminated the burden of requiring the user to be at the location of the device being tested through the measurement process, allowed the process to be monitored by experts located distant from the device under test, and, as suggested by Ellis, provided a method for correcting any determined problems through remote diagnostics and repair (0008, lines 12-14) as well as allowed the device to be monitored by a team of users rather than just one user at the device itself (0023, lines 1-4).

Response to Arguments

5. Applicant's arguments filed December 05, 2003, have been fully considered but they are not persuasive.

Applicant argues that the "Snyder reference does not disclose that the computer programs defining [these] tests contains 'variation points' as called for in claim 1 of the present invention."

The Examiner maintains that the invention of Snyder discloses a testing program that reaches a variation point, at which time a process modification software module is provided including a user defined function for causing the variation and associating the user-defined function with the variation function (i.e. a menu subroutine is executed when a variation point of the program is reached and, upon the selection of a user-defined function/procedure from the menu, control is passed from the menu subroutine to the selected procedure/passed into the measurement process) (column 26, lines 33-67).

Applicant also argues that the "Snyder reference does disclose or teach 'providing a process modification software module'. Snyder is concerned with being able to modify the data input to a test rather than the ability to modify the operation of the measurement process itself" and while the invention of Snyder discloses a program "recipe", "[t]here is no method disclosed for variation of the 'recipe', rather

Snyder is concerned with only variation of data and parameters (column 5, lines 64-66, column 12, lines 24-51)."

The Examiner asserts that while the meaning of claims of issued patents are interpreted in light of the specification, prosecution history, prior art and other claims, this is not the mode of claim interpretation to be applied during examination. During examination, the claims must be interpreted as broadly as their terms reasonably allowed (In re Zletz, 893 F.2d 319, 321, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989)).

In this case, the overall measurement process is directly affected by the input of different data and parameters, and therefore, the measurement process is varied. The claims do not specify that the 'recipe' be modified, but only that variation is caused in the measurement process and therefore the Snyder teaching of variation of the measurement process by a change of input data meets the limitations as claimed. Further, claims 14-18 specify that the modification is that of data, numerical parameters, control parameters, configuration data, and/or input signals. These variations would not necessarily change the 'recipe' of the process but instead would vary the process due to changes in values, similar to that of Snyder.

Applicant then argues that "[s]till further, Snyder does not disclose 'associating the user-defined function with the variation function', as called for in claim 1 of the present invention. An example of this is described in the specification on page 8, lines 6-14. Snyder is concerned with data modification only and provides 'data objects' rather than 'user defined functions'. Consequently, there is nothing in the

Snyder reference to suggest the association of a user-defined function with a variation function."

First, the Examiner notes that although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Secondly, in column 26, lines 33-67, Snyder discloses providing a menu function that the user defines though selection of a particular choice (i.e. "Menu Choice Selection: When the user selects a choice on the frmMenu form, the selection can be logged to the central logger with USER_EVENT severity and cls-MenuInt's Sub SelectChoice(choice As Integer) can be called. The routine can retrieve the clsMenu object (at index "choice") from the MenuChoice collection. Based on the value of its action_type attribute one of the following can occur:") and that this user-defined function is associated with a variation function (i.e. "Action type 'PROCEDURE': Indicates control can be transferred to a test executive internal procedure. The cls-Menu object's 'action' attribute can contain a keyword which can be used to identify the procedure to be called").

Applicant then argues that "[r]eferring to Fig. 2 of the present invention, if the calling function 202 corresponds to Snyder's test executive (1100) and the standard measurement 204 corresponds to Snyder's test environment components (1600) or tests (1400), there is no equivalent in Snyder to the process modification 206.

'Providing a process modification software module' is an element of claim 1 and is not disclosed or suggested by the Snyder reference."

The Examiner asserts that the measurement process is modified by user definition of a menu function that includes the process modification software module (column 25, line 42 to column 26, line 5 and column 26, lines 45-67).

Applicant argues "[r]egarding claim 2, an interface realized by the measurement process is serviced by the process modification module. Snyder column 26, lines 62-67 describes how control may be passed from the test executive to an internal procedure. This corresponds in the present invention to passing control from a calling function (202 in Fig. 2) to a standard measurement module (204 in Fig. 2). Snyder does not disclose how control may be passed from within a standard measurement function to a process modification module (206 in Fig. 2) as called for in claim 2."

The Examiner first asserts that claim 2 only recites, "wherein the process modification software module further comprises an interface servicing element that services an interface realized by the measurement process" and Snyder discloses that the function calls used in process modification software module are operable to invoke interfaces and to pass parameters to the variation functions including keywords (column 26, lines 62-67) or measurement data (column 29, lines 49-53) as well as operable to receive/retrieve parameters back from the variation function

including control parameters indicative of the selected instructions provided (column 26, lines 49-52).

Applicant argues, "[r]egarding claim 7, the Snyder reference teaches that a call to a standard measurement function may be initiated by a user. However, in claim 7, the call is initiated by a variation point in a standard measurement module, the user selects which process modification module with respond to the call.

The Examiner asserts that claim 7 only recites, "wherein said interface is determined by the user and is passed into said measurement process" and, as noted above, the invention of Snyder discloses that the function calls used in the process are operable to invoke interfaces, as determined by the user, and to pass parameters to the variation functions including keywords (column 26, lines 62-67) or measurement data (column 29, lines 49-53) as well as operable to receive/retrieve parameters back from the variation function including control parameters indicative of the selected instructions provided (column 26, lines 49-52).

Applicant argues, "[w]ith respect to claim 8, Snyder (column 20, lines 20-24) describes implementing a system as collection of software modules using Active-X DLL's (1600- in Fig. 3). However, he does not disclose the use of a process modification software module to which control is passed from a variation point within a computer program controlling a measurement process."

As noted above, Snyder does disclose executing a user-defined menu function when a variation point is reached in the measurement program.

Applicant argues, "[r]egarding claim 14, the Snyder reference teaches the use of data objects to control data input to a measurement process. In contrast, in claim 14, the data is modified at a point within the measurement process by call to a process modification software module."

The Examiner asserts that claim 14 only specifies that "variation comprises modification of data" and further asserts that Snyder discloses that the variation in the measurement process modifies either string or numeric data (column 14, lines 10-11).

Applicant argues, "[r]egarding claim 17, the Snyder reference allows only control of data. If a new test device with increased functionality is to be tested, it cannot be fully configured merely by changing data values: new functionality must be added. The use of a process modification software module, as called for in 17 allows both data and functionality to change."

The Examiner asserts that claim 17 only specifies that "said measurement process is applied to a device under test and said variation comprises alteration of a configuration of the device under test" and further asserts that a Snyder teaches measurement variation for a specific device under test (column 3, lines 50-58 and column 16, lines 5-14) as well as provides a menu of selectable alternatives for user-

modification of control parameters, test device configuration, and device input signals (column 3, lines 53-55, column 5, lines 3-6 and 50-59, and column 17, lines 31-38).

Applicant argues, "[r]egarding claim 18, the approach taught in the Snyder reference would allow the parameters of an applied test signal to be varied, but would not allow new test signals to be applied."

The Examiner asserts that claim 18 only specifies that "said measurement process is applied to a device under test and said variation comprise causing input signals to be supplied to the device under test" and further asserts that a Snyder teaches measurement variation for a specific device under test (column 3, lines 50-58 and column 16, lines 5-14) as well as provides a menu of selectable alternatives for user-modification of control parameters, test device configuration, and device input signals (column 3, lines 53-55, column 5, lines 3-6 and 50-59, and column 17, lines 31-38).

With respect to the rejection of claims 5, 6, 10-13, 34 and 35 under 35 U.S.C. 103(a), Applicant argues that "[t]he Snyder reference is concerned with collecting test measurements; the Ellis reference is concerned with control of tools for manufacture. These are different areas of technology, and there is no suggestion in either reference to combine them. Hence there is no prima facie case for combining the reference or modifying Snyder in view of Ellis. The suggestion that a

combination is beneficial uses hindsight and does not provide a motivation to combine the references."

The Examiner concedes that in order to be relied upon as a basis for rejection of the claimed invention, a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, (See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992)). In this case, both the invention of Snyder and Ellis are concerned with software execution of desired process control (Snyder, column 19, lines 36-47 and Ellis, 0004). Further, in response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. (See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971)). In this case, motivation for the combination exists because specifying that the predetermined protocol be a Simple Object Access Protocol or a Common Object Request Broker Architecture, and that the measurement process and the modification software are located in separate remote computers that communicate over a network, would have eliminated the burden of requiring the user to be at the location of the device being tested through the measurement process, allowed the process to be monitored by experts located

distant from the device under test, and, as suggested by Ellis, provided a method for correcting any determined problems through remote diagnostics and repair (0008, lines 12-14) as well as allowed the device to be monitored by a team of users rather than just one user at the device itself (0023, lines 1-4).

Applicant argues that "[c]laims 5 and 6 call for the interface between the process modification software module and the measurement process to be specified according to particular protocols. Nothing in Snyder, Ellis or a combination thereof teaches an interface between a process modification software module and the measurement process. Snyder teaches an interface between a test executive and a test. Ellis is concerned with manufacturing tools and does not provide a process modification software module or a measurement process."

The Examiner asserts that the invention of Snyder teaches a measurement process for obtaining test measurements (abstract) interfaced to a process modification software module (column 26, lines 33-67).

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to Applicant's disclosure.

U.S. Patent Application Publication No. 2004/0031015 to Ben-Romdhane et al. teaches a system and method for manipulation of software.

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey R. West whose telephone number is (703)308-1309. The examiner can normally be reached on Monday through Friday, 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marc S. Hoff can be reached on (703)308-1677. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0956.

jrw
March 1, 2004

MARC S. HOFF
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